



Docket: P/35-4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:

Michael Krysiak

Art Unit: 3643

Application No.: 09/769,076

Filed: January 25, 2001

For: COLORED OR FRAGRANCED ...

Examiner: A. Valenti

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

DECLARATION

I, Michael Krysiak, declare under penalty of perjury as follows;

1. I am competent to make this Declaration and the facts set forth by this Declaration are based on my personal knowledge.
2. I graduated from the University of Wisconsin-Milwaukee majoring in Industrial Engineering.
3. I am the co-inventor of Application No. 09/769,076 ('076). Encap LLC is the assignee of the '076 application.
4. I have been asked to review and analyze US patent nos. 6,058,647 ("Emalfarb"); 6,076,299 ("Spittle"); 5,235,781 ("Holley"); 3,702,755 ("Palmer"); as well as the Examiner's non-final Office Action Summary and Detailed Action which discusses these references.

5. I am providing this Declaration in response to the above matters. I may not address every point in the Examiner's Actions, but my failure to address any point does not mean I agree with that point and should not be interpreted as agreement with that point.
6. I presently am the CEO at Encap, LLC., and have been with the company since its inception in 1999. Encap researches, develops, patents, manufactures, and sells seed and soil based products for the retail lawn/garden market, construction/landscape market, and forest fire restoration market.
7. I have given various presentations relating to seed watering, seed encapsulation, carrier delivery systems, erosion control, seed establishment, quality and service throughout the United States.
8. Previously, I worked for FEECO International, Inc. as Manager of Quality and Service. FEECO designs, builds and installs material agglomeration and processing equipment for companies in the environmental and fertilizer markets. Prior to FEECO, I worked at Krueger International (KI) as an Industrial/Quality Engineer.
9. After reviewing the present office action, Encap has revised its claims to clarify the methods set forth in the claims. For example, the Examiner stated that "applicant has not claimed the boundaries of the soil nor explicitly that the mulch is covering the soil." Encap has delineated the boundaries taught in Encap's claims, along with defining the claim term "mulch" to be products that are applied over seed beds. Encap believes that its amendments highlight the differences between applicant's invention and that of the cited prior art, without changing and/or compromising the unique and novel properties of Encap's claimed invention.

10. One of Ordinary Skill in the Art is defined as one who had the following formal education, work experience and/or real world experience, at the time of the invention:

Understands the relationship between a colored mulch and its ability to change color to that of the moisture levels of the surface of the soil and related seeds.

Understanding the importance of water to the establishment and growth of the seeds planted at the soil surface, and understanding that consumers who apply seed do not know when and how long to water a lawn.

11. I am at least one of ordinary skill in the art.

12. The definition of “colored” as defined in the ‘076 specification is “dye and/or pigment” (page 2, para 0029; page 3, para 0037).

13. The definition of “mulch” as defined in the ‘076 specification is “products that are applied over and/or with grass seed beds to help increase seed germination and/or decrease soil erosion, allowing seeds to become firmly established in the seeded area”. (page 1 para 0003).

14. The definition of “changes color” is defined in the ‘076 specification is “a change in color or color intensity”. (Page 4, para 0054; page 4, lines 20-21 in Office Action dated 1/9/12.

15. Encap’s ‘076 patent application teaches and claims a method for watering seeds at the surface of the soil, based on the relationship between the color of the mulch product and that of the moisture at the surface of the soil where the seed has been planted.

16. I have read the cited prior art of the Spittle patent in view of Emalfarb and Holley and do not find them to be material, nor does it render the claims of Encap's '076 application obvious.

17. Encap's claims claim: A method of determining and/or adjusting soil surface moisture by use of a colored mulch product comprising: providing a mulch product having a distinct color recognizable by a user on a soil surface of a seed bed; changing color of said mulch product in response to moisture levels within said mulch product, whether moisture is removed from the mulch product or added to the mulch product; said color change related to moisture content of said surface of said soil and/or said seed bed; indicating to a user by said color change when to adjust moisture level of said surface of said soil and/or said seed bed. The color of the mulch has a relationship to the moisture content of the surface of the soil.

18. It would not have been obvious to combine Spittle in view of Emalfarb to create Encap's claimed invention of the '076 application as Encap teaches a mulch product that is applied over seed beds to help increase seed germination and/or decrease soil erosion, allowing seeds to become firmly established in the seed bed. Emalfarb teaches a two-part horticultural product within the growing medium, and a sensor having a body made up of a porous material that changes in physical appearance with a change in the amount of moisture retained by the porous material. In an operative state, the first part of the sensor body resides within the growing medium and a second part of the body remains visible to allow

a user to ascertain through the appearance of the second part of the sensor the amount of moisture in the growing medium.” (Abstract)

19. Encap’s claims require that the mulch product is on the surface of the soil wherein the soil contains seeds. Though Spittle teaches placing mulch on soil, it would not be obvious to use Spittle in view of Emalfarb, as Emalfarb does not teach anything about seeds (i.e., the word “seed” does not appear anywhere in Emalfarb’s teachings). Rather, Emalfarb’s teaching is about caring for plants (i.e., no longer seeds) within a growing medium. One of skill in the art understands the watering needs are different for seeds and plants.

20. It certainly would not be obvious to combine Spittle with Emalfarb as Spittle teaches, “This invention features mulching pellets for application to a ground surface”. (Col. 1 lines 44-45). Emalfarb teaches, “In an operative state, the first part of the sensor body resides **within the growing medium** and a second part of the body remains visible to allow a user to ascertain through the appearance of the second part of the sensor the amount of moisture **in the growing medium.**” (col. 2 lines 2-7). Furthermore, Emalfarb teaches, “to more accurately sense the moisture content **throughout the depth of the growing medium.** (Col. 1 lines 47-48).

21. Encap claims that the “color change is related to the moisture content of the surface of the soil and or the seed bed.” It would not have been obvious to combine Spittle in view of Emalfarb and Holley to create Encap’s claimed invention of the ‘076 application as the claimed “changing colors” is not taught in either Spittle (col. 3 lines 10-11), Holley (col. 2 line 39) and Emalfarb or any

combination of same nor is it inherent. I attended an interview with the Examiner where I brought mulches which were left with the Examiner which did not change color when moisture was added or removed from it. Therefore, it is not inherent.

22. It would not have been obvious to combine Spittle in view of Emalfarb and Holley to create Encap's claimed invention as neither Spittle nor Holley teach a color change and are surface applied materials (as described above). Emalfarb, when discussing the problems with other prior art stresses, "moisture cannot be sensed below finger depth. High heat may cause the surface moisture to evaporate while the growing medium maintains a substantial amount of moisture below the surface." (Col. 1 lines 42-46). In a like manner to Spittle, Holley teaches application to the soil surface (Col. 1 line 37) and would not be obvious to combine with Emalfarb. Furthermore, Emalfarb teaches, "to more accurately sense the moisture content **throughout the depth of the growing medium** (col. 1, lines 47-48).

23. It would not have been obvious to combine Spittle in view of Emalfarb and Holley to create Encap's claimed invention as Emalfarb teaches "wicking moisture between the first and second ends" (claim 15). The teaching of Emalfarb is based on a materials ability to "wick" moisture. (col. 3 line 30). Neither Encap, nor Spittle/Holley teach the well known art of "wicking" moisture up.

24. It would not have been obvious to combine Spittle in view of Emalfarb and Holley to create Encap's claimed invention as Encap teaches "changing colors in response to the moisture content added to the soil". (page 2, section 0029, lines

9-10). Spittle and Holley do not teach color change, as noted above, and Emalfarb teaches a color change in response to the moisture content that has been absorbed into the soil, as noted above.

25. Encap claims, "indicating to a user by said color change when to adjust moisture level of said surface of said soil and/or said seed bed." It would not have been obvious to combine Spittle in view of Emalfarb and Holley to create Encap's claimed invention as Spittle and Holley do not teach a color change indicator, and Emalfarb teaches a method to determine the amount of moisture **in the growing medium**. (Col. 2 lines 6-7).

26. I have read the cited prior art of the Holley patent in view of Palmer and do not find them to be material or in combination to render the claims obvious.

27. Palmer is in the same field as Emalfarb in that it teaches a means for indicating moisture **below** the soil surface for the health of **plants** via the use of a **wick**. Palmer teaches the use of a wick to determine amount of moisture under the surface of the soil. (col. 1 lines 12, 24-25, 43, 55; col. 2 lines 16-17), indicating when a plant needs water (col. 1 lines 12, 18, 27) whereby a wick element is used to bring moisture out of the soil (col. 1 lines 55-56) convey moisture from one place to another (col. 2 lines 24-27). Palmer requires the addition of a moisture indicating element that is isolated from the wick so that it can indicate the amount of moisture in the air space, rather than of the wick (col. 2 lines 47-51).

28. Holley teaches large, moisture holding pellets or briquettes comprised of blended seed and finely pulverized paper along with fertilizer (col. 1 lines 24-27)

that are applied to soil. Holley states that said pellets/briquettes are colored by a green dye (same color as grass) (col. 2 line 39).

29. Palmer does not teach the importance of moisture at the surface of the soil; the care of the seeds in a seed bed; or the use of a mulch product as an indicator of when to water, all of which are taught by Encap's '076 application. In addition, Holley does not teach the use of color to be an indicator of soil moisture at the surface of the soil; or a product that changes color; or the relation between surface moisture of the soil, color of mulch product and their impact on seed growth/care.

30. Therefore, Spittle in view of Emalfarb and Holley, and Holley in view of Palmer do not make obvious the claims of the '076 patent application.

31. Encap's 076 application realized such properties were not recognized or appreciated for their abilities to determine moisture levels at the soil surface, as noted above, in caring for seeds in a seed bed. Therefore Encap believes that the claims of the '076 patent application are unique and novel.

32. I believe that there was a long felt need for what is claimed in the '076 patent application.

33. An adequate water supply is a primary environmental factor influencing germination of seeds in a seed bed (page 520, Turfgrass Science and Culture by James Beard, Prentice Hall, 1973).

34. Since the early inception of seed bed mulch and combination mulch/seed products sold in the lawn and garden market, industry leaders such as the Scotts Miracle-Gro Company, Pennington, Barenbrug, PennMulch, Amturf, and Profile

Products sold multi-millions of dollars in products. These products include the “then leading” combination product by Scotts called PatchMaster. These mulch and combination products contained no visual indicator on knowing when, and how much to water a seed bed at the top surface of the soil. Rather, their focus was on a mulch product that holds more and more water at the soil surface. The companies secured patents for their various mulch and combination products to secure their spot as a better seed-cover product. The seed companies also spent countless research and development dollars on how to create the next best seed genetically to attempt to address environmental conditions that challenge seed growth.

35. Encap’s ‘076 invention recognized the important role that the user plays in seeding success. Encap understood that the user would respond to a visual indicator (color change), to help them overcome their own lack of performance in watering seed beds.

36. After Encap’s ‘076 invention, the Scotts Miracle-Gro Company, the industry and category leader, proclaimed in a national advertising campaign that they learned “Half of all grass seed users have told us that they have not been successful in getting grass to grow because they: forgot to water, didn’t water frequently enough, or didn’t water enough.” (video: Turf Builder Grass Seed-not just any grass seed). Another Scotts video declared, “I discovered the problem of growing grass seed-is me. I am a grass seed failure. Well, I forgot to water, and the seed dries out. And once it dries it’s dead. And once its dead.” (video: Turf Builder Grass Seed Commercial).

37. After the development of Encap's claimed '076 invention and related products in the national lawn and garden market, competitors recognized and appreciated the innovation in Encap's claimed invention and created, for the first time, copy-cat products with market-changing results and success.

38. Encap's claimed "when to water" invention is now the standard used and marketed by the major players in the lawn and garden industry. The Scotts Miracle-Gro company considers their EZ Seed product (see Attachment A), which features the Encap's claimed technology, their most innovative product launch in the history of the company.

39. Scotts' video entitled, "3 steps to seeding success with Scotts EZ Seed" calls EZ Seed a revolutionary product and states, "EZ Seed" will tell you when it's time to water again. When the area turns light brown, its time to water."

(<http://www.scotts.com/smg/learn/video/videoPage.jsp?detailId=16300034&subNavId=16900004&navId=16900002&parentId=100006>).

40. In another Scotts video entitled "Grass Seed Success with Scotts Turf Builder EZ Seed", Scotts states, "EZ Seed will tell you what it needs. When the mix lightens, it is time to water again. The result-thick, long lasting beautiful grass. (<http://www.youtube.com/watch?v=Cch2xtGy5P8>).

41. In another video from Scotts entitled, How to use Scotts turf Builder EZ Seed", Scotts states, "Oh, look at how dark that is getting (referring to the mulch color when water is applied to the soil). Yes. So that is going to let me know when I have enough water on it? Yes. As when it starts to dry out, it will turn

lighter-that is an indication you need to water it again”.

(<http://www.scotts.com/smg/learn/video/videoPage.jsp?detailId=14800042>)

42. In yet another Scotts video featuring Patch Magic combination seed/mulch product, Scotts states, “As Patch Magic dries, it will turn lighter brown so you will know exactly when to water next.”

(<http://www.bing.com/videos/search?q=miracle+gro+patch+magic&view=detail&mid=44E267DD24974A79FA2A44E267DD24974A79FA2A&first=0&adlt=strict>).

43. Further, as to copying, the Scotts Miracle Gro company, while discussing their strategic plan in their 10-K on 11-24-09, indicated “we believe this strategy resulted in the successful launch of several new products in 2009, including Turf builder Water Smart Grass Seed and EZ Seed Grass Seed.” Similarly, the Scotts website reports, Product innovation at Scotts Miracle Gro begins with a thorough understanding of consumers’ emerging interests, lawn and garden habits and unmet needs. That leads to a robust development process that combines those insights with the most advanced R&D capabilities in the business to create products that are simple, sustainable and significant to our customers. In FY 2011, our spending on research and development was \$50.0 million. Our history is full of examples of where this approach has led to breakthrough products that have changed the category and excited consumers from innovative formula developments to advanced applicator technology.”

(<http://www.grogood.com/CorporateResponsibilityReport/ProductResponsibility>).

The innovative products pictured on this website included the Scotts EZ Seed Product.

44. Encap's discovery of the use of a colored mulch product applied to the surface of soil, along with seed, wherein the mulch product changes color in concert with moisture of surface of said soil is industry changing technology. This technology addresses the long felt need (identified by the dominant player in the industry) and successfully created a following of "copy-cat" type products that have revolutionized the mulch and combination product category.

45. I hereby declare that all of the statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the patent application to which it relates or any patent issued thereon.

Dated: 1-14-13

Michael Krysiak
Michael Krysiak